

WHAT IS CLAIMED IS:

1 1. A computer-implemented method of constructing a portfolio having a
2 utility defined by at least a first function and a second function, the computer-implemented
3 method comprising:

4 selecting a plurality of assets in the portfolio; and

5 maximizing an expected utility of the portfolio; wherein the at least first
6 function is a power-utility function having a first power defining the degree of risk aversion
7 of a holder of the portfolio and wherein the at least second function is a power-utility function
8 having a second power defining the degree of risk aversion of the holder of the portfolio,
9 wherein the first power is different from the second power.

1 2. The method of Claim 1 wherein the at least first power-utility function
2 defines the utility of the portfolio for positive rates of returns and wherein the at least second
3 power-utility function defines the utility of the portfolio for negative rates of returns.

1 3. The method of Claim 1 wherein the at least first power-utility function
2 is a log-utility function.

1 4. The method of Claim 2 wherein the at least first power-utility function
2 is a log-utility function.

1 5. The method of Claim 4 wherein the act of maximizing the expected
2 utility of the portfolio further comprises the act of selecting a weight for each asset in the
3 portfolio.

1 6 . The method of Claim 5 wherein the act of selecting a weight for each
2 asset in the portfolio further comprises:

3 assigning a probability point to the occurrence of each one of a plurality of
4 economic events;

5 computing the utility of the portfolio for each economic event;

6 multiplying the utility of portfolio computed for each economic event with the
7 probability of the occurrence of that economic event thereby generating a plurality of values;
8 and

9 summing the values.

1 7. The method of Claim 6 wherein the act of assigning a probability point
2 to the occurrence of each one of the plurality of economic events comprises assigning a
3 probability point to the occurrence of each one of the plurality of economic events based on
4 past economic data.

1 8. A computer system for constructing a portfolio having a utility defined
2 by at least a first function and a second function, the computer system comprising:

3 a processor; and

4 a memory coupled to the processor, said memory storing a plurality of code
5 modules for execution by the processor, the plurality of code modules comprising:

6 a code module for selecting a plurality of assets in the portfolio; and

7 a code module for maximizing an expected utility of the portfolio; wherein the
8 at least first function is a power-utility function having a first power defining the degree of
9 risk aversion of a holder of the portfolio and wherein the at least second function is a power-
10 utility function having a second power defining the degree of risk aversion of the holder of
11 the portfolio, wherein the first power is different from the second power.

1 9. The computer system of Claim 8, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 defining positive rates of returns and wherein the code module for maximizing the expected
4 utility of the portfolio comprises code for the at least second function defining negative rates
5 of returns.

1 10. The computer system of Claim 8, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 that is a log-utility function.

1 11. The computer system of Claim 9, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 that is a log-utility function.

1 12. The computer system of Claim 11 wherein the code module for
2 maximizing the expected utility of the portfolio further comprises a code module for
3 selecting a weight for each one of the plurality of assets in the portfolio.

1 13. The computer system of Claim 12, wherein the code module for
2 selecting a weight for each one of the plurality of assets in the portfolio further comprises:
3 code module for assigning a probability point to the occurrence of each one of
4 a plurality of economic events;
5 code module for computing the utility of the portfolio for each one of the
6 plurality of economic events; and
7 code module for multiplying the utility of the portfolio computed for each one
8 of the plurality of economic events with the probability of the occurrence of that economic
9 event thereby generating a plurality of values; and
10 code module for summing the values.

1 14. A computer program for constructing a portfolio having a utility
2 defined by at least a first function and a second function, the computer program being
3 executable by a processor and comprising:
4 a code module for selecting a plurality of assets in the portfolio; and
5 a code module for maximizing an expected utility of the portfolio; wherein the
6 at least first function is a power-utility function having a first power defining the degree of
7 risk aversion of a holder of the portfolio and wherein the at least second function is a power-
8 utility function having a second power defining the degree of risk aversion of the holder of
9 the portfolio, wherein the first power is different from the second power.

1 15. The computer program of Claim 14, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 defining positive rates of returns and wherein the code module for maximizing the expected
4 utility of the portfolio comprises code for the at least second function defining negative rates
5 of returns.

1 16. The computer program of Claim 14, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 that is a log-utility function.

1 17. The computer program of Claim 15, wherein the code module for
2 maximizing the expected utility of the portfolio comprises code for the at least first function
3 that is a log-utility function.

1 18. The computer system of Claim 17 wherein the code module for
2 maximizing the expected utility of the portfolio further comprises a code module for selecting
3 a weight for each one of the plurality of assets in the portfolio.

1 19. The computer system of Claim 18, wherein the code module for
2 selecting a weight for each one of the plurality of assets in the portfolio further comprises:
3 code module for assigning a probability point to the occurrence of each one of
4 a plurality of economic events;
5 code module for computing the utility of the portfolio for each one of a
6 plurality of economic events; and
7 code module for multiplying the utility of the portfolio computed for each one
8 of the plurality of economic events with the probability of the occurrence of that economic
event thereby generating a plurality of values; and
9 code module for summing the values.

1 20. A networked system for constructing a portfolio having a utility
2 defined by at least a first function and a second function, the networked system comprising:
3 a communication network;
4 a computer system coupled to the communication network;
5 a database coupled to the communication network;
6 wherein the computer system is configured to:
7 select a plurality of assets in the portfolio; and
8 maximize an expected utility of the portfolio; wherein the at least first
9 function is a power-utility function having a first power defining the degree of risk aversion
10 of a holder of the portfolio and wherein the at least second function is a power-utility function
11 having a second power defining the degree of risk aversion of the holder of the portfolio,
12 wherein the first power is different from the second power.

1 21. The networked system of Claim 20 , wherein the at least first function
2 defines positive rates of returns of the portfolio and wherein the at least second function
3 defines negative rates of returns of the portfolio.

1 22. The networked system of Claim 20, wherein the at least first function
2 is a log-utility function.

1 23. The networked system of Claim 21, wherein the at least first function
2 is a log-utility function.

1 24. The networked system of Claim 23, wherein the networked system is
2 further configured to select a weight for each asset in the portfolio.

1 25. The networked system of Claim 23, wherein the computer system is
2 further configured to:

3 assign a probability point to the occurrence of each one of a plurality of
4 economic events;

5 compute the utility of the portfolio for each one of the plurality of economic
6 events;

7 multiply the utility of portfolio computed for each economic event with the
8 probability of the occurrence of that economic event thereby generating a plurality of values;
9 and

10 sum the values.

11 26. A computer program stored on a computer-readable medium for
12 constructing a portfolio having a utility defined by at least a first function and a second
13 function, the computer program comprising:

14 code for selecting a plurality of assets in the portfolio; and

15 code for maximizing an expected utility of the portfolio; wherein the at least
16 first function is a power-utility function having a first power defining the degree of risk
17 aversion of a holder of the portfolio and wherein the at least second function is a power-
18 utility function having a second power defining the degree of risk aversion of the holder of
19 the portfolio, wherein the first power is different from the second power.

1 27. The computer program of Claim 26, wherein the code for maximizing
2 the expected utility of the portfolio comprises code for the at least first function defining
3 positive rates of returns and wherein the code for maximizing the expected utility of the
4 portfolio comprises code for the at least second function defining negative rates of returns.

1 28. The computer system of Claim 26, wherein the code for maximizing
2 the expected utility of the portfolio comprises code for the at least first function that is a log-
3 utility function.

1 29. The computer system of Claim 27, wherein the code for maximizing
2 the expected utility of the portfolio comprises code for the at least first function that is a log-
3 utility function.

1 30. The computer program of Claim 29 wherein the code for maximizing
2 the expected utility of the portfolio further comprises code for selecting a weight for each
3 asset in the portfolio.

1 31. The computer program of Claim 30, wherein the code for selecting a
2 weight for each asset in the portfolio further comprises:

3 code for assigning a probability point to the occurrence of each one of a
4 plurality of economic events;

5 code for computing the utility of the portfolio for each one of the plurality of
6 economic events;

7 code for multiplying the utility of portfolio computed for each economic
8 event with the probability of the occurrence of that economic event thereby generating a
9 plurality of values; and

10 code for summing the values.